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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/687,142	10/16/2003	Michael R. Furst	A2486-US-NP XERZ 2 01277	8247

27885 7590 08/24/2007		EXAMINER	
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CLEVELAND, OH 44114			

ART UNIT	PAPER NUMBER
2625	

MAIL DATE	DELIVERY MODE
08/24/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 October 2003*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-32* is/are pending in the application.

　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-32* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *16 October 2003* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

　　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　　a)☐ All　b)☐ Some * c)☐ None of:

　　　1.☐ Certified copies of the priority documents have been received.

　　　2.☐ Certified copies of the priority documents have been received in Application No. _____.

　　　3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

　　* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO/SB/08)
　　Paper No(s)/Mail Date *6/20/2005*.

4)☐ Interview Summary (PTO-413)
　　Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Drawings

1.   The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description:

(1) 115, paragraph [0059], line 10;

(2) 115, paragraph [0061], lines 2, 5, 6 and 10;

(3) 115, paragraph [0072], lines 2 and 3.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2.   The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors.   Applicant's cooperation is

requested in correcting any errors of which applicant may become aware in the specification.

3.   The disclosure is objected to because of the following informalities:

(1) paragraph [0051], line 1, "system 1 composed" should be – system 1 **(Fig. 1)** composed --.

Appropriate correction is required.

Claim Objections

4.   Claims 3, 6-9, 13, 22-23, 26-27 and 32 are objected to because of the following informalities:

(1) claim 3, line 1, "**wehrein**" should be – **wherein** --;

(2) claim 6, line 4, "system;" should be – system. --;

(3) claim 7, line 1, "**wherin**" should be –**wherein** --;

(4) claim 9, line1, "**calim**" should be – **claim** --;

(5) claim 13, line 1, "**an** network" should be – **a** network --;

(6) claim 22, line 1, "claim **4**" should be – claim **14** --;

(7) claim 26, line 1, "**serivce**" should be – **service** --;

(8) claim 32, line 1, "**wehrein**" should be – **wherein** --.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

5.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6.   Claims 1-5 and 10-15, 17 and 22 are rejected under 35 U.S.C. 102(e) as being

anticipated by Engstrom et al. (US Patent 6,463,078).

(1) regarding claim 1:

Engstrom '078 discloses an embedded system connected to an IOT of a device

(column 20, lines 12-16, where the client computer is being interpreted as the

embedded system and since there is a physical connection between the client computer

and a server it is evident that this may happen through an IOT) through at least one

existing device interface (column 17, lines 61-65, where it is suggested that the

connection is being held by a communication protocol existing) and comprising data

collection (column 4, lines 17-20, where the data structure is capable collecting data)

and display functionality (147 in Fig. 3), and a local UI for operation and management of

functionality locally (column 2, lines 24-27, graphical user interface allowing the user to

manage the system functionality), and a services platform (column 8, lines 13-16, where

the operating system is being interpreted as the platform) and APIs for remote

connectivity and device-centric services (column 4, lines 29-42, where the API offers device services from a central location as well as remote connectivity for remote computers).

(2) regarding claim 2:

Engstrom '078 further discloses a networked, embedded personal computer in a housing with no direct input or output devices (column 6, lines 56-58, where the connection is remote, therefore not a direct input or output).

(3) regarding claim 3:

Engstrom '078 further discloses wherein the system is connected to the IOT through at least two physical interfaces (152 and 151 in Fig. 3).

(4) regarding claim 4:

Engstrom '078 further discloses a UI available via a browser running on a computer on a network to which the system is connected (column 2, lines 24-27, graphical user interface of a browser).

(5) regarding claim 5:

Engstrom '078 further discloses a web server (column 21, lines 45-47).

(6) regarding claim 10:

Engstrom '078 further discloses an add-on component (column 6, line 19, where the personal computer is being interpreted as the add on component) comprising:

a power supply (column 6, line 19, where it is inherent that a computer would have a power supply as shown in Watters et al. (US Patent 4,959,860), column 4, lines 40-41);

a motherboard (column 6, line 19, where it is inherent that a computer would have a motherboard as shown in Watters et al. (US Patent 4,959,860), column 4, line 39);

an auxiliary input/output board (column 6, line 19, where it is inherent that a computer would have an auxiliary input/output board as shown in Watters et al. (US Patent 4,959,860), 16 in Fig. 1);

a non-volatile memory (column 6, line 19, where it is inherent that a computer would have a motherboard as shown in Watters et al. (US Patent 4,959,860), column 4, line 37, ROM is a non-volatile memory); and

a housing within which the power supply, motherboard, auxiliary input/output board, and NVM reside (column 6, line 19, where it is inherent that a computer would have a motherboard as shown in Watters et al. (US Patent 4,959,860), column 4, lines 36-44).

(7) regarding claim 11:

Engstrom '078 further discloses an operating system embedded on the motherboard (column 6, lines 39).

(8) regarding claim 12:

Engstrom '078 further discloses wherein the NVM is flash memory (column 6, lines 35-36).

(9) regarding claim 13:

Engstrom '078 further discloses a network interface (column 7, line 3).

(10) regarding claim 14:

Engstrom '078 further discloses at least one interface compatible with an IOT of a device (column 20, lines 12-16, where the client computer is being interpreted as the embedded system and since there is a physical connection between the client computer and a server it is evident that this may happen through an IOT).

(11) regarding claim 15:

Engstrom '078 further discloses wherein the at least one interface comprises a serial port (column 6, line 48).

(12) regarding claim 17:

Engstrom '078 further discloses wherein the at least one interface comprises PWS (column 21, lines 45-47, where the Web server is being interpreted as a PWS).

(13) regarding claim 22:

Engstrom '078 further discloses an embedded software system that provides flexible components in support of locally hosted functions and services that can be dynamically added and configured (column 8, lines 5-8 and column 21, lines 43-52, where the software is capable of supporting functions and services of the embedded system).

7.   Claims 6-9 are rejected under 35 U.S.C. 102(e) as being anticipated by Frailong et al. (US Patent 6,496,858).

(1) regarding claim 6:

Frailong '858 discloses in an embedded system comprising a web browser (column 11, lines 62-64) connected to an IOT of a device and to a network (108 in Fig. 1), a method of interacting with the embedded system comprising:

configuring the embedded system with network information (column 2, lines 30-33);

using a browser as the local UI for the embedded system (502 in Fig. 5 and column 11, lines 62-64).

(2) regarding claim 7:

Frailong '858 further discloses wherein configuring the embedded system includes loading network proxy (column 5, lines 21-23, where a gateway is a proxy server), firewall password (column 5, lines 21-23, where the network security involving a firewall is being interpreted as firewall password since in order to have a secure network it is necessary to have a password to maintain the connection secure of possible threads), and DNS IP addresses (column 12, lines 57-60).

8.   Claims 24-29 are rejected under 35 U.S.C. 102(b) as being anticipated by Motoyama (US Patent 5,887,216).

(1) regarding claim 24:

Motoyama '216 discloses a diagnostic service for a device (column 2, lines 28-30, where the monitoring of actions is being interpreted as the diagnostic service) comprising:

a user interface (UI) accessible by a user and in communication with an operating system of a device (Fig. 5); and

UI elements representing at least one diagnostic routine for the device (250 in Fig 5, where the size indicator is being interpreted as one of the diagnostics routines of the system).

(2) regarding claim 25:

Motoyama '216 further discloses at least one device provided diagnostic routine preexisting on the device (column 3, lines 17-20, where the diagnostic service existed within the business office).

(3) regarding claim 26:

Motoyama '216 further discloses at least one service provided diagnostic routine (column 2, lines 65-67 and column 3, lines 1-3).

(4) regarding claim 27:

Motoyama '216 further discloses wherein the at least one service provided diagnostic routine includes a method of executing a plurality of routines in a specific order to optimize toner density levels and obtain consistent image quality (column 2, lines 65-67 and column 3, lines 1-3).

(5) regarding claim 28:

Motoyama '216 further discloses wherein the at least one device provided diagnostic routine includes a belt edge learn routine that learns the edge of a new intermediate belt to improve lateral registration and belt steering performance (column 6, lines 38, 46-48, where the memory learns about the belt and performs a diagnostic routine for the belt).

(6) regarding claim 29:

Motoyama '216 further discloses wherein the at least one device provided diagnostic routine includes a registration control routine that sets up the complete image on image registration system found in the IOT (column 6, lines 35-36 and lines 42-43,

where the image density sensor is being setup in accordance with the diagnostic

routine).

Claim Rejections - 35 USC § 103

9.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

10.   Claims 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Frailong et al. (US Patent 6,496,858) as applied to claims above, and further in view of

Cabrera et al. (US Publication 2003/0177183).

(1) regarding claim 8:

Frailong '858 discloses all the subject matter as described above except wherein

configuring the embedded system enables the embedded system to connect to an edge

server.

However, Cabrera '183 teaches wherein configuring the embedded system

enables the embedded system to connect to an edge server (paragraph [0012], lines

11-14).

Therefore it would have been obvious to one of ordinary skill in the art at the time

the invention was made to configure the embedded system enables the embedded

system to connect to an edge server as taught by Cabrera '183, in the system of

Frailong '858. By doing this the system will be secure and trusted, adding an additional level of security by having an edge server.

(2) regarding claim 9:

Frailong '858 discloses all the subject matter as described above except wherein the edge server manages the queues, messages, services, and transactions associated with the end-to-end operation of the device services.

However, Cabrera '183 teaches wherein the edge server manages the queues, messages, services, and transactions associated with the end-to-end operation of the device services (paragraph [0057], lines 12-21).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to configure the embedded system enables the embedded system to connect to an edge server as taught by Cabrera '183, in the system of Frailong '858. By doing this the system will be secure and more efficient, since the edge is performing additional functionalities, thus increasing the versatility.

11.   Claims 16, 19-21 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Engstrom et al. (US Patent 6,463,078) as applied to claims above, and further in view of Frailong et al. (US Patent 6,496,858).

(1) regarding claim 16:

Engstrom '078 discloses all the subject matter as described above except wherein the at least one interface comprises EPSV.

However, Frailong '858 teaches wherein the at least one interface comprises EPSV (column 3, line 67, where the gateway computer is being interpreted as an EPSV).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made that one interface comprises EPSV as taught by Frailong '858, in the system of Engstrom '078. With this, the versatility of the system improves as well as the connectivity of the device.

(2) regarding claim 19:

Engstrom '078 discloses all the subject matter as described above except a router connected to the at least one interface to manage information.

However, Frailong '858 teaches a router connected to the at least one interface to manage information (column 4, line 22).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to have a router connected to the at least one interface to manage information as taught by Frailong '858, in the system of Engstrom '078. With this the amount of devices connected through a network can be increased.

(3) regarding claim 20:

Engstrom '078 discloses all the subject matter as described above except wherein the router preempts activity in response to a higher priority interface becoming active.

However, Frailong '858 teaches wherein the router preempts activity in response to a higher priority interface becoming active (column 4, lines 18-26, where the router is used as needed by the system).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made that the router preempts activity in response to a higher priority interface becoming active as taught by Frailong '858, in the system of Engstrom '078. With this the router can release the computer device from unnecessary processes at the same time that makes the system modular.

(4) regarding claim 21:

Engstrom '078 further discloses wherein the at least one interface includes a PWS port (column 21, lines 45-47) and a serial port (column 6, line 48).

Engstrom '078 discloses all the subject matter as described above except the router preempts activity on the serial port when the PWS port becomes active.

However, Frailong '858 teaches the router preempts activity on the serial port when the PWS port becomes active (column 4, lines 18-26, where the router is used as needed by the system).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made that the router preempts activity on the serial port when the PWS port becomes active as taught by Frailong '858, in the system of Engstrom '078. With this the router can release the computer device from unnecessary processes at the same time that makes the system modular.

(5) regarding claim 23:

Engstrom '078 further discloses wherein the flexible components include a web server (column 21, lines 45-47).

Engstrom '078 discloses all the subject matter as described above except a device model agent, and a Java virtual machine.

However, Frailong '858 teaches a device model agent (column 12, lines 5-6), and a Java virtual machine (column 10, lines 26-29).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to have a device model agent, and a Java virtual machine as taught by Frailong '858, in the system of Engstrom '078. Thus, increasing the flexibility and versatility of the system.

12.   Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Engstrom et al. (US Patent 6,463,078) as applied to claims above, and further in view of Thomson (US Patent 5,574,848).

Engstrom '078 discloses all the subject matter as described above except wherein the at least one interface comprises a CAN Bus.

However, Thomson '848 teaches wherein the at least one interface comprises a CAN Bus (column 1, lines 15-17).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made that the at least one interface comprises a CAN Bus as taught by Thomson '848, in the system of Engstrom '078. Reception of a plurality of good messages advantageously provides a CAN protocol controller device which exits its

busoff state with a high degree of confidence that the fault that caused the node to enter

the busoff state has been cleared (column 2, lines 58-61).

13.   Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over

Motoyama (US Patent 5,887,216) as applied to claims above, and further in view of

Budnik et al. (US Patent 5,893,008).

Motoyama '216 discloses all the subject matter as described above except

wherein the at least one device provided diagnostic routine includes a halftone routine

that adjusts the halftone densities printed by the system.

However, Budnik '008 teaches wherein the at least one device provided

diagnostic routine includes a halftone routine that adjusts the halftone densities printed

by the system (column 7, lines 13-22).

Therefore it would have been obvious to one of ordinary skill in the art at the time

the invention was made that the at least one device provided diagnostic routine includes

a halftone routine that adjusts the halftone densities printed by the system as taught by

Budnik '008, in the system of Motoyama '216. With this, the functionality of the system

is improved and the system gain versatility.

14.   Claims 31-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Motoyama (US Patent 5,887,216) as applied to claims above, and further in view of

Engstrom (US Patent 6,463,078).

(1) regarding claim 31:

Motoyama '216 discloses all the subject matter as described above except

wherein the UI is a Web based UI provided by an embedded web server.

However, Engstrom '078 teaches wherein the UI is a Web based UI provided by an embedded web server (column 21, lines 45-47).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made that the UI is a Web based UI provided by an embedded web server as taught by Engstrom '078, in the system of Motoyama '216. With this, it improves the system by allowing web access to the system, thus adding compatibility.

(2) regarding claim 32:

Motoyama '216 discloses all the subject matter as described above except wherein the UI is accessible from any networked personal computer with a suitable browser.

However, Engstrom '078 teaches wherein the UI is accessible from any networked personal computer with a suitable browser (column 21, lines 45-47, where it is inherent that if the UI is web based it can be accessed by any networked computer).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made that the UI is accessible from any networked personal computer with a suitable browser as taught by Engstrom '078, in the system of Motoyama '216. With this, it improves the system by allowing web access to the system, thus adding compatibility.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lennin R. Rodriguez whose telephone number is (571)

270-1678. The examiner can normally be reached on Monday - Thursday 7:30am -

6:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, King Poon can be reached on (571) 272-7440. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

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Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Lennin Rodriguez
8/20/07

KING Y. POON
SUPERVISORY PATENT EXAMINER